King's College Turns to Vistacom to Accelerate Hybrid Learning Environment Amidst COVID-related Challenges

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BARCO

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Dr. Barry H. Williams
Dean, McGowan School of Business
King's College

THE CUSTOMER

With a history rooted in Catholic identity and intellectual tradition, King's College in Northeast Pennsylvania pursues excellence in teaching, learning, and scholarship through a rigorous core curriculum with nationally accredited professional programs at the undergraduate and graduate levels. King's has 2,200 full-time, part-time and graduate students from 17 states and 14 different countries. Its academic rigor has resulted in top recognitions, such as being named as one of America's Best Colleges by U.S. News & World Report, Barron's Best Buys in College Education, and the John Templeton Foundation Honor Roll for Character-Building Colleges.

THE CHALLENGE

As one of 17 educational institutions within the same general area, King's College is constantly challenged to remain competitive and differentiate themselves within the market in an effort to continually attract a new student population. Innovation was identified early on as one of the school's top strategies to set themselves apart. However, within a cost model in which the college is 92% tuition driven, the question always remained: 'how do we ensure we remain innovative while also being sensitive to cost and overall budget?'

In 2005, King's College Managing Director of User Services, Raymond Pryor, engaged Vistacom to begin navigating these challenges. From the beginning, Pryor challenged Vistacom to be his partner in technology planning and design with a constant eye toward creativity and innovation, while also staying conscious of the budget.

"Several years ago, we began to invest in a wireless infrastructure to implement a bring-your-own-device (BYOD) initiative for faculty and students," said Raymond Pryor. On this new direction, the university would invest more money in faculty devices and reduce the investment in physical classroom computers. "We still needed to be able to allow faculty the ability to wirelessly present from their own devices to the main display in the classroom — but do so in a way that provided a seamless audio and video experience. At the time, we had trouble finding a technology solution that could meet our quality standards," Pryor said.

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EARLY ADOPTERS

Starting with the William G. McGowan School of Business—and under the direction of Dean Barry Williams—Room 120, a standard 35-seat computer lab, was identified as the space to begin experimenting with their innovative vision. "We needed to completely rethink this outdated space. This is where we began breaking the mold and moving toward a forward-thinking classroom environment that would begin to set the standard for the innovative touch that would differentiate the college within the area," stated Dean Barry Williams.

Through Vistacom's advisement, King's College connected with Barco to discuss their vision for a BYOD learning environment. As King's College worked closely with Vistacom and Barco to test the original Barco ClickShare technology, they began to realize that this was a solution that could deliver on all of the school's requirements for being a truly wireless system. "The solution allowed the instructor to use their laptop and mirror the content with audio and video without a lag," Pryor said. Initially, the school rolled it out to a few faculty members who adopted it successfully into their daily workflow and became proponents for the technology as the transition continued to move forward into other departments. "With continued training and support, we got them comfortable with the whole experience of BYOD and using the technology in the classrooms, and then we set our sights on the second phase of our collaboration with Vistacom and Barco," he said.

That's when the group began brainstorming on how to completely reimagine Room 120 within the School of Business. The goal for the room was simple: be innovative. The classroom needed to be able to be used for in-person huddles and meetings, hybrid learning, and fully virtual learning—as well as allow instructors to fully connect wirelessly to the room and use video and audio while being able to project lessons for in-person learning and engaging with virtual students simultaneously. "We had a vision to use this room to facilitate how people interact in the real world, to build teamwork and communication skills — a true collaborative environment that was outfitted with technology to enhance these skills," said Dr. Williams. "When Ray and I looked at this traditional computer lab and asked ourselves how we get four students to easily collaborate on a project together, there wasn't a clear way to do that in the way the room was set up."

As the relationship with Vistacom and Barco grew stronger, a new and innovative solution came to light. The space would transition into a fully collaborative and immersive education experience for both instructors and students utilizing the BYOD infrastructure already established across campus. Room 120, now referred to as the Innovation Lab, was transformed into an active learning environment using a pod design for student huddle spaces, all thanks to Barco's weConnect classroom solution. As described in a previous story, "**Improved Learning Through Collaboration**," the classroom was designed with four pods, each outfitted with a display and wireless presentation capability for students to present and collaborate from their own device. The instructor teaches from the center of the room, sharing content from a laptop and with full control of how the content on each display is routed around the room.

As the integration of this space became a reality, Pryor and Dr. Williams had kept in mind a final phase to their vision for the room. The ability to bring virtual students into the classroom with all of the integrated collaboration capabilities would be their most innovative idea yet. Then, the inevitable hit: COVID-19. This accelerated the latest phase of this project so that instructors from the Business School could transition fully to remote instruction given the strict lockdowns imposed in the state. "We had been working on the plan for this room for months before the pandemic hit, and we were slated to really dive into the project over the summer," Pryor said. "Our whole plan was thrown in the air when COVID hit. This is where I truly valued the relationships we've built with Vistacom and Barco and the reputation of the teams that are in place."

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THE SOLUTION

Adding a virtual classroom component to the Innovation Lab with fully integrated audio and video was a challenge fully embraced by both King's College and Vistacom. "I was grateful to have Vistacom as a partner during this endeavor. Through all of the challenges in taking this classroom to the next level and integrating something so innovative, Vistacom has always had my back. The way I can collaborate on new ideas with the Vistacom Engineers has been extremely valuable and helpful throughout this entire process," stated Pryor.

Together, Vistacom, Barco and King's College designed their most innovative solution to date. To display remote students within the physical classroom, a 2 x 4 Barco UniSee high-definition LCD video wall was installed on the back wall of the classroom. Integrated with Barco's weConnect Virtual Classroom software, the video wall can display up to 48 virtual students. A camera is strategically placed in the center of the video wall, capturing the instructor and the 4 pods, and giving the remote students the perspective and experience as if they were a part of the physical classroom.

With the ability to select and send remote students to each of the four pods in the space, the weConnect software can potentially enable up to 6 additional students per pod for full two-way audio, video interaction and hybrid collaboration with students physically in the room.

One of the biggest challenges within the space was the integration of high-quality, two-way audio from the classroom to the remote students and vice versa. "Physics was not in our favor – everything was a hard surface," stated Pryor. "It was very challenging to figure out how we were going to limit how far sound travels, and how to contain sound within the pods while limiting distractions throughout the rest of the space." Vistacom installed speakers and microphones, both in the ceiling and at each pod, integrated through a digital signal processor (DSP) to facilitate crystal clear audio conferencing. Using advanced audio features like out-of-bounds pick-up rejection, Vistacom was able to essentially create an audio "bubble" over each pod to keep the sound as isolated as possible within each working group.

In order to bring all of the technology components of the classroom together, Vistacom's Programming Department provided a Crestron control system including a 10" tabletop touch panel enabling the instructor to use an intuitive graphical interface to easily control all video wall and audio functions.

With the systems now in place, the Barco weConnect virtual classroom allows King's College to conduct fully virtual or hybrid classroom sessions. Both remote and in-room participants are able to engage in a real-time and collaborative environment that's designed for group work and sharing, while active participation is encouraged with polls and quizzes.

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THE RESULT

Keeping an eye on the next innovative idea has been the key to success at King's College. With support from leadership and a reliable technology partner in Vistacom, Pryor notes that success would not look the same without these important relationships. Driven by a forward-thinking approach, King's College was already planning to incorporate virtual learning, affording them the opportunity to be ahead of the curve when COVID-19 hit. Additionally, since the faculty was already used to working in classrooms with wireless connectivity and a BYOD framework in place, the transition was a little smoother to the full-blown virtual learning environment that is now in use within the Business School. "We slowly deployed elements of the Barco portfolio, but we were able to give faculty new and innovative technology at a comfortable pace," Pryor said. Faculty note the easy-to-use interface and quality solution as being the best part about the technology.

The hybrid learning environment now allows students and teachers to have a more interactive experience, even when participating virtually. "It's as if every student is in the front row of the classroom," Pryor said. "Students can raise their hands or participate in real-time polling as if they're in a face-to-face classroom. We've found that this entire idea is growing in popularity amidst the challenges that higher education institutions have faced since the pandemic began."

The space itself can only fit 13 people total while social distancing, so there is a schedule for who will be in class and who will attend the class online. The room is booked all day long and used in various ways; some use the room as a collaboration space, some use it for teaching all the pods, and some are utilizing more of the hybrid learning environment.

> *"The great thing is, four or five faculty members are using the room and they're all using it a little differently," Pryor said. "They have the flexibility to be creative and deliver their content in a unique way to the students."*

Since the space has worked so well, it has become a part of the college's tour for all prospective students and their families to see, while other universities are beginning to look at ways to adopt the technology in their own schools. "We wouldn't be where we are today if it weren't for the students in the virtual rooms and faculty in the classrooms helping us understand and execute this vision," Dr. Williams said.

"Barco and Vistacom have been fantastic and open-minded about the features and changes that we'd like to make to the platform to fit our needs," Pryor said. "I know sometimes our ask can be rather unorthodox, but these partners realize that if it's something we're asking for and identifying as a need, there's likely a use case for it elsewhere. That's what makes the partnership between our organizations so special."